

The Spotted Owl Observations Database Management Framework

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Biogeographic Data Branch
California Natural Diversity Database



SPOWDB Management Framework



Overview

Goal:

- Provide a clear and transparent description of
 - Database
 - Current Practices

Disclaimer:

- Describes **current** status
- May be updated

Spotted Owl Observations Database Management Framework



SPOWDB Management Framework



Contents

- Background
- Limitations
- Contents
- Activity Centers
- Data Issues, Problem-Solving, and Agency Collaboration
- Availability
- Source Data Acquisition
- Barred Owl
- Updates and Training

Spotted Owl Observations Database



Background

History

- 1973: created by Gordon Gould
- 1992: first referenced in the FPR
- 2003: available in the BIOS Viewer

SPOWDB and the CNDDDB

- Fish and Game Code section 1932
- Different data models
 - SPOWDB: Point
 - CNDDDB: Polygon
- CNDDDB subscription and license agreement



Spotted Owl Observations Database



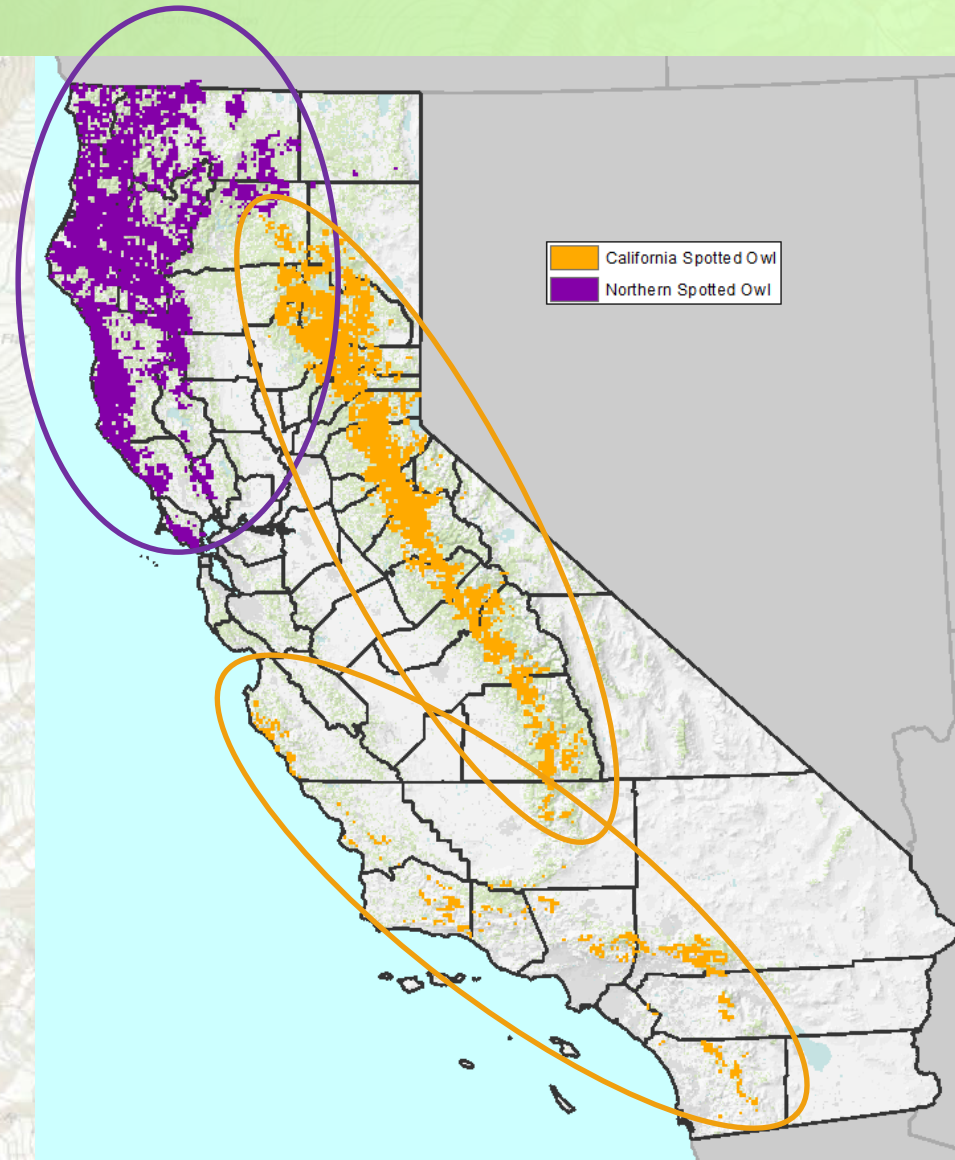
Background

Centralized location for:

- Submission
- Review
- Reporting

Northern Spotted Owl

California Spotted Owl



Spotted Owl Observations Database



Limitations

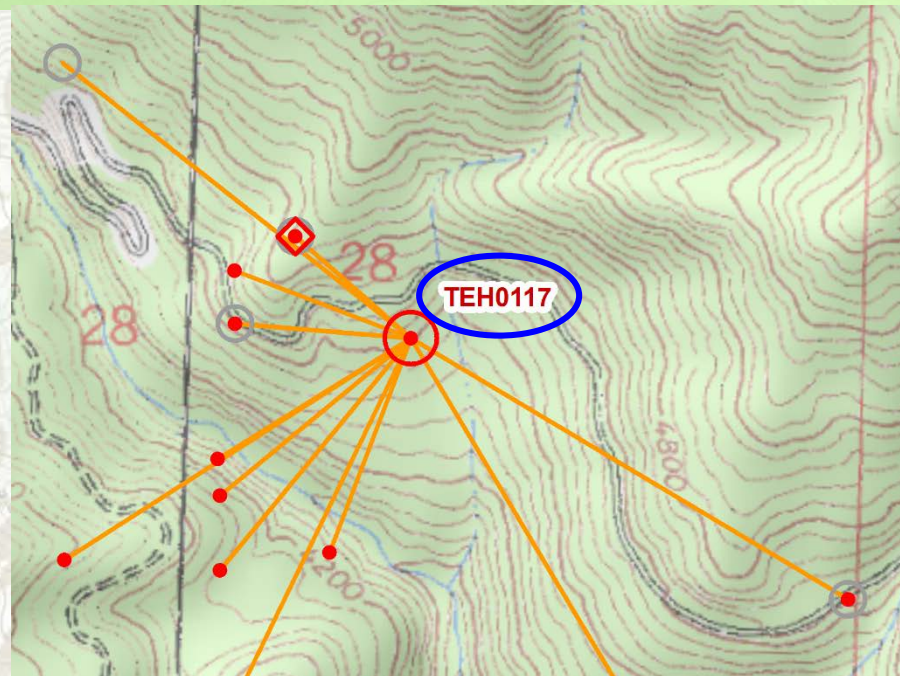
- The absence of detection data does not necessarily mean owls are not or have not been present.
- The database should not be used to calculate population trends, abundance, density, etc.
- The database does not track occupancy
- The database does not track barred owl influence
- The database is a starting point

Spotted Owl Observations Database



Definitions

- Observation
 - Positive: **Detection**
 - Negative: **No Response**
- Activity Center
 - “Best” Observation
- Masterowl Number
 - Site Name
- Site
 - Area of concentrated or stand-alone observations
- Attribute Table
 - Tabular Data
- Metadata
 - Information about the dataset



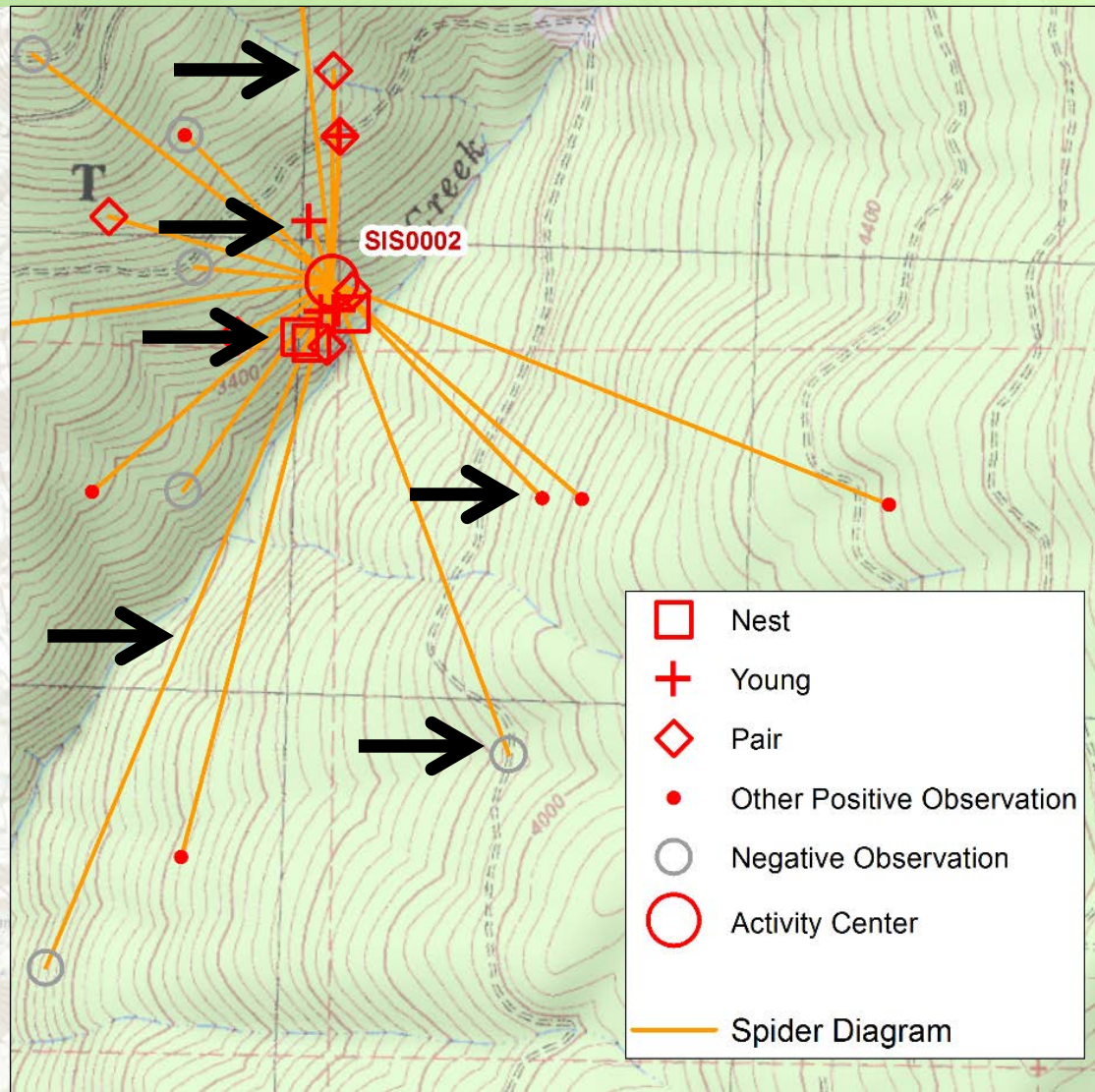
MASTEROWL	TYPEOBS	DATEOBS	NUMADOBS	AGESEX	PAIR	NEST
TEH0117	POS	1994	1	UM		
TEH0117	POS	2007	2	UMUF	Y	N
TEH0117	NEG	2008	0			
TEH0117	POS	2012	1	UU		
TEH0117	POS	2012-05-15	1	UM		
TEH0117	POS	2013-04-25	1	UF		
TEH0117	NEG	2013-05-02	0			
TEH0117	AC	2013-05-13	2	UMUF	Y	
TEH0117	NEG	2013-05-28	0			
TEH0117	POS	2014-05-30	1	UU		

Spotted Owl Observations Database



Contents

- Nest locations
- Bird locations
 - Juveniles
 - Pairs
 - Resident Singles
 - Singles
- Survey locations
 - Call stations
 - Follow-ups
 - Activity center searches



Spotted Owl Observations Database



Activity Center

2012 US Fish and Wildlife Service NSO Protocol Definition

“Activity centers are a location or point representing ‘the best of’ detections such as nest stands, stands used by roosting pairs or territorial singles, or concentrated nighttime detections.”

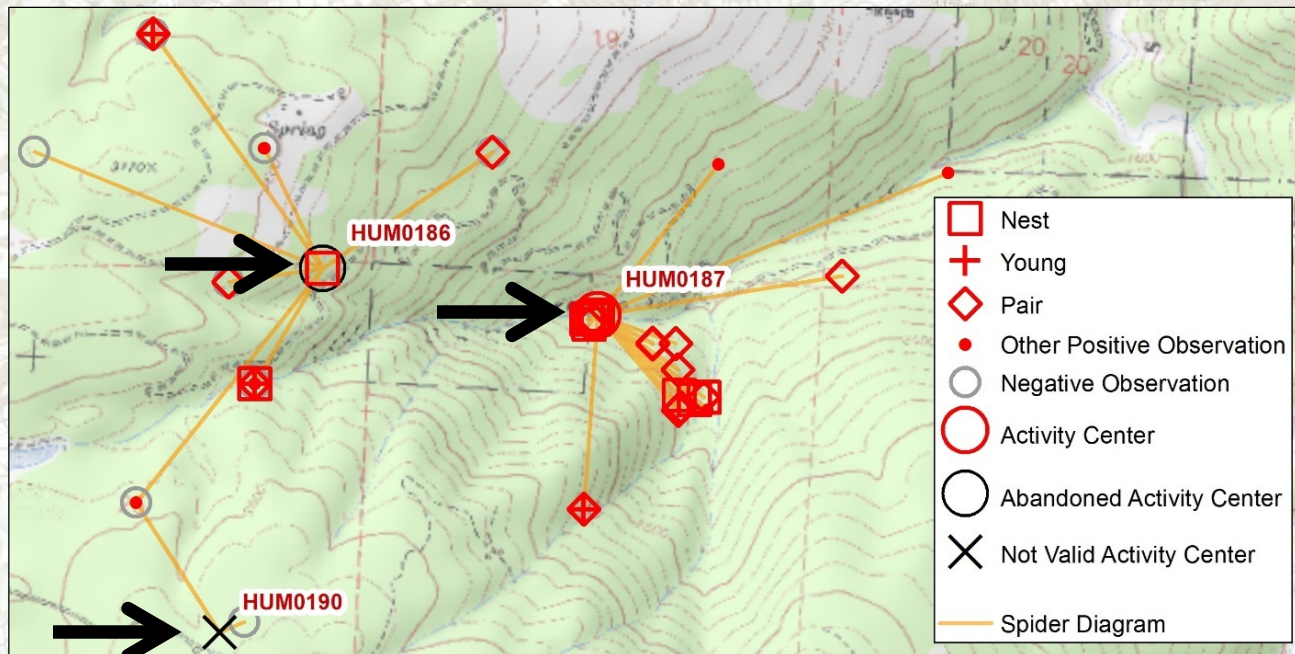
- 1) Nest
- 2) Nest Stand
- 3) Daytime Pair
- 4) Daytime Resident Single
- 5) Nighttime Pair
- 6) Multiple Nighttime Single

Spotted Owl Observations Database



Activity Center Status

- Abandonment: Habitat no longer supports territorial owls
- Invalidation: Activity center does not meet the protocol definition



Spotted Owl Observations Database



Activity Center Status

- Abandonment

- Federal Guidance

- YFWO, 2008
- AFWO, 2017

- Process

- Request abandonment through CDFW or CALFIRE
- Provide:
 - Survey history
 - Current habitat conditions
 - Changes to habitat
 - Barred owl presence
- CDFW or CALFIRE will request Technical Assistance from USFWS

Spotted Owl Observations Database



Activity Center Status

- Invalidation

- Historic ACs

- Process

- Request site review

- Provide survey history

- Database Manager determination:

- Potentially Valid AC

- Potentially Invalid AC

- Database manager will consult with USFWS and CDFW

Spotted Owl Observations Database



Data Issues, Collaboration, and Problem-solving

- Addressing Errors
 - Inform the Database Manager of any potential errors
 - Provide support documentation
- Collaboration and Problem-solving
 - Data contributor
 - CDFW regional staff
 - USFWS
 - CALFIRE
 - NSO Interagency Working Group

Spotted Owl Observations Database



Availability

- CNDDDB Subscription
 - BIOS Viewer
 - Data Download

[Home](#) | [Data](#) | [CNDDDB](#) | [Data Updates](#)

Monthly CNDDDB Data Download

The CNDDDB and accompanying GIS data are updated and processed monthly for distribution to subscribers. The Spotted Owl Observations Database is continually updated and processed periodically for distribution to subscribers. All CNDDDB subscribers may download these updates. Access to the download site is password controlled; see below for password information. CNDDDB and Spotted Owl dataset components have been compressed into separate, self-executing files. Subscribers with computers running Windows® may use these files to update their CNDDDB and Spotted Owl data.

[Updates to the CNDDDB GIS Data, August 2012 \(PDF\)](#)

Jump to [Data Portal](#), or [read instructions](#)

All uses of data from the CNDDDB are subject to the terms and conditions contained in our [License Agreement \(PDF\)](#).

<https://wildlife.ca.gov/Data/CNDDDB/Subscribe>

Spotted Owl Observations Database



Availability

- Text report

<https://wildlife.ca.gov/Data/CNDDDB/Subscribe>

Data Version Date:
MM/DD/YYYY

Report Generation Date:
MM/DD/YYYY

Report #1 - Spotted Owl Sites Found

Known Spotted Owl sites having observations within the search area.



Meridian, Township, Range, Section (MTRS) searched:

H_##N_##E Sections(##,##);

H_##N_##E Sections(##,##);

NOTES:

Sample Report for Spotted Owl Database Framework

Data Version Date:
MM/DD/YYYY

Report Generation Date:
MM/DD/YYYY

Report #2 - Observations Reported

List of observations reported by site.



Meridian, Township, Range, Section (MTRS) searched:

H_##N_##E Sections(##,##);

H_##N_##E Sections(##,##);

NOTES:

Sample Report for Spotted Owl Database Framework

Type	Date	Time	#Adults	Age/Sex	Pair	Nest	#Young	Latitude DD NAD83	Longitude DD NAD83	MTRS	Coordinate Source
Masterowl: HUM0187 Subspecies: NORTHERN											
POS	1989		2	UMUF	Y			##.#####	-###.#####	H ##N ##E ##	Quarter-section centroid
POS	1989-07-24	2030	2	UMUF	Y			##.#####	-###.#####	H ##N ##E ##	Quarter-section centroid
AC	2005		2	UMUF	Y	Y	1	##.#####	-###.#####	H ##N ##E ##	Contributor
POS	2006		1	UM				##.#####	-###.#####	H ##N ##E ##	Contributor
POS	2007		2	UMUF	Y			##.#####	-###.#####	H ##N ##E ##	Contributor

Spotted Owl Observations Database



Source Data Acquisition

• Necessary Data

- **What** was observed?
- **When** was it observed?
- **Where** was it observed?

• Ways to Contribute

1. Data entry template – available by request
2. Contributor format
 - Spreadsheet
 - Shapefile, geodatabase
 - Datasheets and maps
3. Online CNDDDB Field Survey Form
4. Plan Number

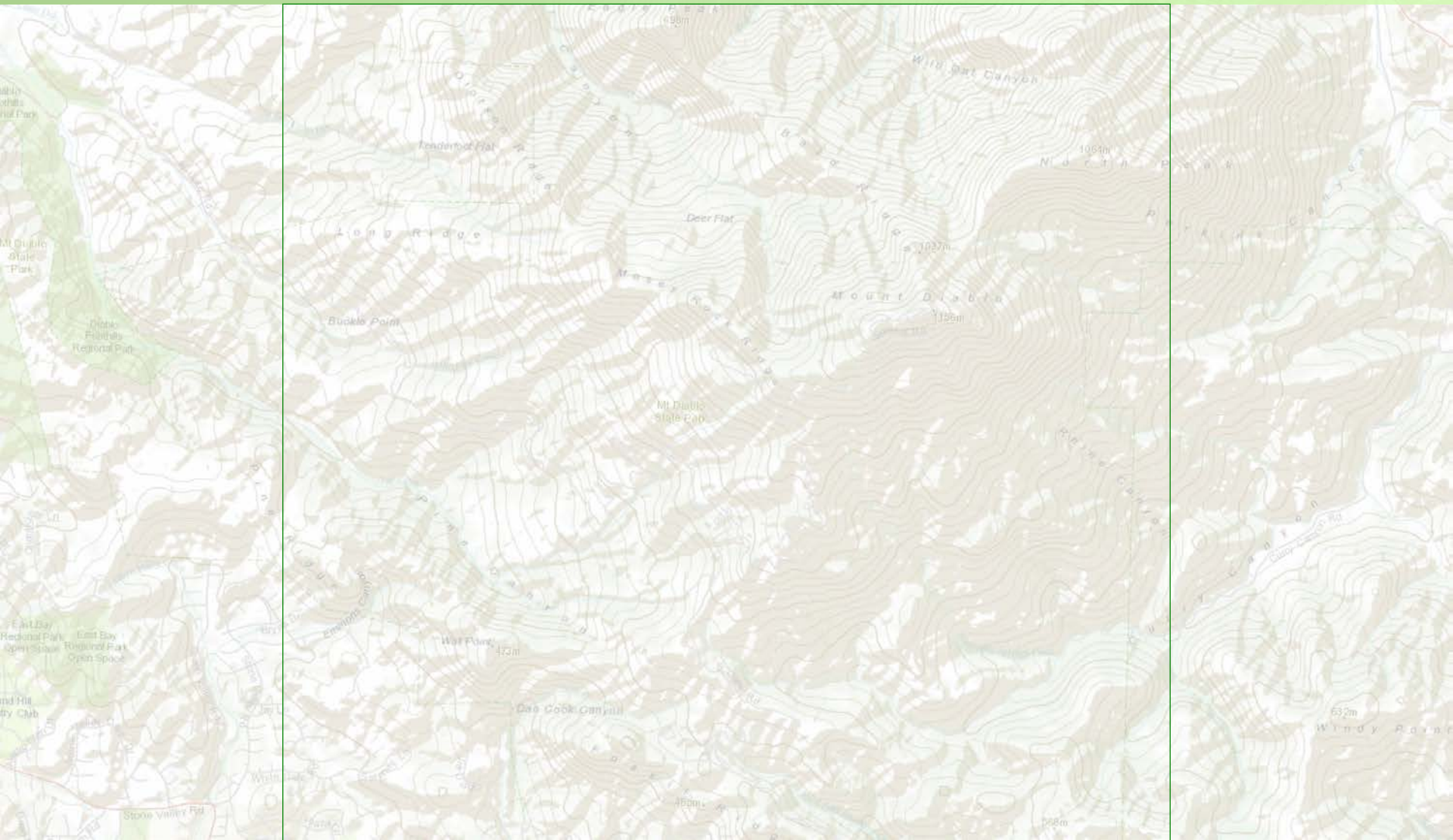


<https://www.wildlife.ca.gov/Data/CNDDDB/Submitting-Data>

Spotted Owl Observations Database



Barred Owl



Spotted Owl Observations Database



Updates

The screenshot shows the website's header with the CA.GOV logo, the California Department of Fish and Wildlife logo, and a search bar. The navigation menu includes Home, Fishing, Hunting, Licenses & Permits, Conservation, Learning, and Explore. The main content area features a 'CNDDDB News' section with a 'Subscribe to CNDDDB News by Email' button circled in blue. Below this is a 'RECENT POSTS' section listing several articles.

CA.GOV California Department of Fish and Wildlife

Home Fishing Hunting Licenses & Permits Conservation Learning Explore

Home | Data | CNDDDB | News

CNDDDB News

California Natural Diversity Database news updates

[Subscribe to CNDDDB News by Email](#)

Introducing the Spotted Owl Database Management Framework

March 28, 2019 in [General](#)

The [Spotted Owl Observations Database Management Framework \(PDF\)](#) is now available. It provides information on key database topics including:

- Database contents
- Database limitations
- Activity center information
- Addressing data issues
- Contributing Data
- Barred Owl Observations Database

The framework may be updated to reflect future changes to spotted owl management or regulatory guidelines. Substantial updates will be announced here on the CNDDDB News page.

Monthly updates for February 2019

March 11, 2019 in [Monthly Updates](#)

Introducing the Spotted Owl Database Management Framework

Introducing the Spotted Owl Database Management Framework
march 28, 2019

Monthly updates for February 2019

Monthly updates for February 2019
march 11, 2019

New Spotted Owl Observations Database Symbology

New Spotted Owl Observations Database Symbology
march 6, 2019

Reflecting on 2018

Reflecting on 2018
march 1, 2019

Monthly updates for January 2019

Monthly updates for January 2019
february 8, 2019

[Read More](#) →

<https://www.wildlife.ca.gov/Data/CNDDDB/News>

Spotted Owl Observations Database



Training

[https://www.wildlife.ca.gov/
Data/Training](https://www.wildlife.ca.gov/Data/Training)

[Home](#) | [Data](#) | [Training](#)

CNDDDB, RareFind and BIOS Tutorials and Training

Introduction Videos and Tutorials

The following training videos and documents provide the basic information needed to get started using the CNDDDB, RareFind 5, and BIOS 5:

CNDDDB / RareFind 5

- [@CNDDDB Introduction \(video - 37 min\)](#): An introduction to the California Natural Diversity Database that is essential information for anyone who uses this database. It details what the CNDDDB includes, how occurrences are mapped, the ranking systems, the appropriate use of the data, and an introduction to the tools and products that are available.
- [@RareFind 5 User Guide \(PDF\)](#): A complete overview of every tool.
- [@RareFind 5 Demo \(video - 24 min\)](#): A demonstration of how to query the CNDDDB through the RareFind 5 web application.

BIOS 5

- [@Getting Started in BIOS 5 \(PDF\)](#): Just the basics to get you going.
- [@BIOS 5 User Guide \(PDF\)](#): A complete overview of every tool.
- [@BIOS 5 Demo \(video - 18 min\)](#): An introduction to the BIOS 5 web mapping application, and a demonstration of how to operate its basic functions.
- [@Using CNDDDB in BIOS 5 \(PDF\)](#): A demonstration of using the CNDDDB dataset in BIOS 5.
- [@Using the Spotted Owl Report Generator in BIOS 5 \(PDF\)](#): A demonstration of using the Spotted Owl dataset in BIOS 5 to generate reports.
- [@CNDDDB QuickView Tool User Guide \(PDF\)](#): A user guide for using the CNDDDB QuickView tool in BIOS 5.

Live Training Course

The CNDDDB/RareFind/BIOS class is a six-hour course describing the background, purpose, and use of both the CNDDDB dataset and the BIOS web-based map viewing tool (which includes access to the CNDDDB). The class includes instruction and exercises on using many of the tools in both the online RareFind 5 and in BIOS 5, as well as viewing and querying the CNDDDB dataset in BIOS.

Who should attend:

Wildlife and fisheries biologists, botanists, GIS analysts, and others involved with collecting and analyzing biological data and information. Applications include conservation planning, developing study designs, and developing baseline environmental review information. This class is open to people outside of the Department of Fish and Wildlife as well as to CDFW staff. The fee is waived for CDFW staff.

Course Outline:

- CNDDDB background, definitions, and proper use
- Online RareFind 5 query tools and reports
- RareFind 5 exercises
- BIOS 5 background, toolset and usage
- BIOS/CNDDDB exercises

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Thank You

Photo credits:
Mandy Culpepper, 2016
Kate Keiser, 2016



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